

AMENDMENTS TO THE SPECIFICATION:

Please replace the paragraph beginning at page 6, line 16, with the following rewritten paragraph:

FIG 1. depicts the main components of a prior art typical photolithographic processing system to which the present invention is directed;

Please replace the paragraph beginning on page 13, line 26, with the following rewritten paragraph:

In a similar manner, the preferred implementation of the present invention calculates, then applies x/y tilt corrections to a photolithographic exposure tool. As shown in Figs. 7 and 9, the relationship between average upper focus 901 and average lower focus 902 corresponds to the relationship between average upper EW 701 and average lower EW 702, and may be used to derive a y-axis, or "y" tilt. Similarly, the relationship between average right focus 904 and average left focus 903 corresponds to the relationship between average right EW 703 and average left EW 704 and may be used to derive an x-axis or "x" tilt. Referring to Fig. 1B at steps 206 through 209, it is shown that in a similar manner as described herein, the x/y tilt may be optimized by using the 3D profile measurement changes vs. extreme exposure field positions and, a trigonometric relationship between the measurements and exposure field positions. Assuming that the measurement, grouping and storing steps of Fig. 1B at steps 200, 201 have already been performed, the changes in edge width in the x direction corresponding to right – left edge width changes are calculated at step 206, and the changes in edge width in the y direction corresponding to upper – lower edge width changes are calculated at step 207. As shown in Fig. 7, these measurements are then averaged to include an average upper EW, an average lower EW, an average left EW, and an average right EW to aid in determining an actual x/y tilt of the exposure field plane. In Fig. 1B at step 208, the average EW's of Fig. 7 are then used in conjunction with the edge width vs. focus calibration curve of Fig. 8 to

derive an average upper focus, average lower focus, average right focus, and average left focus.